



TFV 2874

PATENT APPLICATION  
Docket No: 14321.80

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of )  
Koji Kikushima )  
Serial No.: 10/541,162 ) Art Unit  
Filed: June 30, 2005 ) 2874  
Confirmation No.: 4381 )  
For: WAVELENGTH MULTIPLEX TRANSMISSION )  
SYSTEMS )

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that the following documents are being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the 27<sup>th</sup> day of March 2006.

- Transmittal for Information Disclosure Statement (3 pages)
- Information Disclosure Statement (2 pages)
- Form PTO-1449 listing 14 references (2 pages)
- A copy of 12 Non-US of the references listed on the Form PTO-1449
- Postcard

Respectfully submitted,

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Docket No: 14321.80

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In re application of		)	
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	Koji Kikushima	)	
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		)	2874
Filed:	June 30, 2005	)	
		)	
Confirmation No.:	4381	)	
		)	
For:	WAVELENGTH MULTIPLEX TRANSMISSION	)	
	SYSTEMS	)	

## TRANSMITTAL FOR INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith for filing and pursuant to 37 C.F.R. § 1.97 is an Information Disclosure Statement, which includes the following statements, if any, required variously by 37 C.F.R. § 1.98:

- Statement of relevance of selected cited references not in the English language which are not translated.
- Statement that selected cited references are substantially cumulative of an enclosed or previously submitted reference.
- Statement that selected cited references were previously cited by or submitted to the United States Patent and Trademark Office in a prior application which is relied upon for an earlier filing date under 35 U.S.C. § 120.

A. Additional Materials Required Due to Content of Information Disclosure Statement

Transmitted are the following documents in addition to the Information Disclosure Statement as required variously under 37 C.F.R. § 1.98:

- ☒ Form PTO-1449 listing 14 references submitted for consideration.
- ☒ A copy of 12 Non-US references listed on the Form PTO-1449.
- ☒ English translations of three (3) of the references listed on the Form PTO-1449 which are not in the English language.
- ☐ Copies of the following documents from the prosecution of a previous, related application:
  - ☐ Form PTO-1449 AND INFORMATION DISCLOSURE STATEMENT; and
  - ☐ Form PTO-892

B. Additional Materials Required Due to Timing of Filing of Information Disclosure Statement

The transmitted Information Disclosure Statement is being filed within one (1) of the following four (4) time periods:

- I. ☒ Prior to the later of either three (3) months following the filing date or the mailing of a first Office Action. Accordingly, no materials other than those listed above are enclosed.
- II. ☐ Following the latter of either three (3) months following the filing date or the mailing of a first Office Action, but before the mailing of a final Office Action or a Notice of Allowance. Accordingly, to secure consideration thereof, one (1) of the following is also enclosed:
  - ☐ Promptness Certification; or
  - ☐ Check No. \_\_\_\_\_ in the amount of \_\_\_\_\_ constituting the submission fee set forth in 37 C.F.R. § 1.17(p).
- III. ☐ After the mailing of a Notice of Allowance, but before payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:
  - ☐ Promptness Certificate;
  - ☐ Petition for Consideration; and

- \_\_\_ Check No. in the amount of \_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).
- IV. \_\_\_ After payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:
- \_\_\_ Petition to Withdraw from Issue; and
- \_\_\_ Check No. \_\_\_ in the amount of \_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

C. Fees

The Commissioner is hereby authorized to charge payment of or any deficiency in the following fees associated with this communication, or to credit any overpayment thereof, to Deposit Account No. 23-3178. A duplicate copy of this letter is enclosed.

- X Any fee required in relation to filing of this letter or any documents transmitted therewith.
- \_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p) in the event that 37 C.F.R. § 1.97(c) applies and the Examiner is not satisfied that any Promptness Certificate submitted meets the requirements of 37 C.F.R. § 1.97(e).
- \_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p).
- \_\_\_ The petition fee set forth in 37 C.F.R. § 1.17(i)(1).

Dated this 27<sup>th</sup> day of March 2006.

Respectfully submitted,



DANA L. TANGREN  
Attorney for Applicant  
Registration No. 37,246  
Customer No. 022913  
Telephone No. 801.533.9800



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SYSTEMS )

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed  
Unaccompanied by English Translation  
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

Japanese Application No. 58-215836: PURPOSE: To prevent an optical signal of adjacent wavelengths from being received in error as a normal signal because of the defective crosstalk characteristic of an optical demultiplexer, even if the signal is received, by inverting a code logic of modulating signals modulating the light having adjacent wavelengths with each other. CONSTITUTION: An optical signal of wavelength  $\lambda_2$  adjacent to a wavelength  $\lambda_1$  and an optical signal of the wavelength  $\lambda_2$  are inverted for the polarity with each other among optical signals transmitted to an optical transmission line 5. If an optical transmitter 3 is failed for example and no optical signal is transmitted, the optical signal of wavelength  $\lambda_1$  outputted from an optical transmitter 2 is restored into an electric signal with an optical receiver 9 having a crosstalk at the optical demultiplexer 7 and the polarity is inverted at an inverter 12. Thus, it is impossible for a data discriminating and reproducing device to detect a synchronizing signal from the received signal, allowing to detect a failure of the like. Thus, a signal of the wavelength  $\lambda_1$  transmitted from the optical transmitter 2 is not discriminated as the normal signal and the failure of line is detected quickly.

Article entitled *A Study on a 10-Gb/s, 8-Channel WDM Transmission System Employing Unequal Wavelength Allocation* discloses an investigate transmission performance of a 10-Gb/s unequally spaced 8-channel WDM transmission system employing a 1.55 mm dispersion shifted fiber (DSF). In this paper, a wavelength allocation is proposed. Furthermore, it is shown that transmission performance was improved by longitudinal variance of fiber chromatic dispersion in actual transmission line.

Dated this 27<sup>th</sup> day of March 2006.

Respectfully submitted,



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Applicant: Koji Kikushima

Confirmation No.: 4381

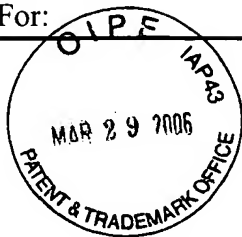
Serial No.: 10/541,162

Att'y Docket No.: 14321.80

Filing Date: June 30, 2005

Art Unit: 2874

For: WAVELENGTH MULTIPLEX TRANSMISSION SYSTEMS

INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANTU.S. Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Issue Date</u>	<u>Name</u>
____ 1	5,257,124	10/26/1993	Glaab et al.
____ 2	5,953,140	09/14/1999	McKiel, Jr.

Foreign Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Publication Date</u>	<u>Country or Patent Office</u>	<u>Translation</u>
____ 3	0 528 225 A3	02/24/1993	EPO	N/A
____ 4	58-215836	12/15/1983	Japan	No
____ 5	05-206952	08/13/1993	Japan	Yes
____ 6	08-018536	01/19/1996	Japan	Yes

Other Documents

(including author, title, pertinent pages, etc.)

<u>Examiner Initial*</u>	
____ 7	K. Kikushima et al., <i>Signal Crosstalk Due to Fiber Nonlinearity in Wavelength Multiplexed SCM-AM-TV Transmission Systems</i> , Optical Fiber Communication Conference (OFC 1995), Post-deadline paper, PD24, February-March 1995.
____ 8	A. Li et al., <i>Experimental Confirmation of Crosstalk Due to Stimulated Raman Scattering in WDM AM-VSB CATV Transmission Systems</i> , Electronics Letters, Vol. 31, No. 18, August 31, 1995, pp. 1538-1539.

Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant: Koji Kikushima  
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Sheet 2 of 2  
 Confirmation No.: 4381  
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- \_\_\_\_\_ 9 Noboru Takachio et al., *A Study on a 10-Gb/s, 8-channel WDM Transmission System Employing Unequal Wavelength Allocation*, The Institute of Electronics, Information and Communication Engineers, Technical Report of IEICE, CS96-43, June 1996, pp. 19-24.
- \_\_\_\_\_ 10 Keang-Po Ho et al., *Demultiplexer Crosstalk Rejection Requirements for Hybrid WDM System with Analog and Digital Channels*, IEEE Photonics Technology Letters, Vol. 10, No. 5, May 1998, pp. 737-739.
- \_\_\_\_\_ 11 Mary R. Phillips et al., *Crosstalk Due to Optical Fiber Nonlinearities in WDM CATV Lightwave Systems*, Journal of Lightwave Technology, Vol. 17, No. 10, October 1999, pp. 1782-1792.
- \_\_\_\_\_ 12 Shibata et al., *Optical Image Distribution System Using an FM Batch Conversion Method*, Institute of electronics, Information and Communication Engineers, Technical Journal B, Vol. J83-B, NO. 7, July 2000, pp. 948-959 (with partial translated).
- \_\_\_\_\_ 13 F. Coppinger, et al., *Nonlinear Raman Crosstalk in a Video Overlay Passive Optical Network*, Optical Fiber Communication Conference (OFC 2003), TuR5, March 2003, pp. 285-286.
- \_\_\_\_\_ 14 ITU-T G. 983.3, *A Broadband Optical Access System with Increased Service Capability by Wavelength Allocation*, March 2001.

### References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.